

## 2 Safety Precautions

In this manual, the following symbols and conventions are used:



This symbol used alone indicates important operating instructions which reduce the risk of injury or poor performance of the unit.



**WARNING:** This symbol indicates potentially hazardous situations which, if not avoided, could result in serious injury or death.



**WARNING:** This symbol indicates situations where dangerous voltages exist and potential for electrical shock is present.



**CAUTION:** This symbol, in the context of a CAUTION, indicates a potentially hazardous situation which if not avoided could result in minor to moderate injury or damage to the equipment.

**CAUTION:** This indicates a situation which may result in property damage.



The snowflake symbol indicates extreme low temperatures and high risk of frostbite. Do not touch bare metal or samples with unprotected body parts.



This symbol indicates a need to use gloves during the indicated procedures. If performing decontamination procedures, use chemically resistant gloves. Use insulated gloves for handling samples and when using liquid nitrogen.



Before installing, using or maintaining this product, please be sure to read this manual and product warning labels carefully. Failure to follow these instructions may cause this product to malfunction, which could result in injury or damage.

Below are important safety precautions that apply to this product:

- Use this product only in the way described in the product literature and in this manual. Before using it, verify that this product is suitable for its intended use. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not modify system components, especially the controller. Use Thermo Scientific exact replacement equipment or parts. Before use, confirm that the product has not been altered in any way.
- Your unit must be properly grounded in conformity with national and local electrical codes. Never connect the unit to overloaded power sources.
- Disconnect the unit from all power sources before cleaning, troubleshooting, or performing other maintenance on the product or its controls.



**WARNING:** Do not store flammable materials in this unit.

## 12 Cleaning

### 12.1 Cleaning the Drawers

To clean the drawers, use a solution of water and a mild detergent. Rinse the drawers and wipe them dry with a soft cloth.

For instructions on removing and reinstalling drawers, refer to Section 10.

### 12.2 Cleaning the Condenser



**CAUTION:** Condensers should be cleaned at least every six months. In heavy traffic areas, condensers load with dirt more quickly. Failure to keep the condenser clean can result in equipment warm-up or erratic temperatures.



**WARNING:** Be sure to disconnect the unit from main power before cleaning the condenser.



**CAUTION:** Never clean near condensers with your fingers. Some surfaces are sharp.

In all models, the condenser is located in the top machine compartment. To clean the condenser:

1. Disconnect the power.
2. Remove the top front grill.
3. Use a vacuum cleaner with hose and brush attachments to clean the front face of the finned surface.
4. Clean up any loose dust and replace the front grill.
5. Reconnect the power.

## 13 Troubleshooting



**WARNING:** Troubleshooting procedures involve working with high voltages which can cause injury or death. Troubleshooting should only be performed by trained personnel.

This section is a guide to troubleshooting equipment problems.

**Table 6. Troubleshooting Procedures**

Problem	Cause	Solution
Unit does not operate or Power Failure Indicator is on.	Power supply	<p>Check that the cord is securely plugged in.</p> <p>All models except undercounter models have a double pole circuit breaker located next to the power inlet. Make sure that it is in the ON (“1”) position. Try cycling the switch to OFF (“0”) then ON (“1”).</p> <p>Plug another appliance into the outlet to see if it is live.</p> <p>If the outlet is dead, check the circuit breaker or fuses.</p>
Temperature fluctuates.	Cold control	Make sure that the cold control is set correctly. Refer to Section 6.
	Condenser	Make sure the condenser is clean. Refer to Section 12.2.
Unit warms up.	Door is open	Make sure the door is completely closed.
	Warm product recently loaded in unit	Allow ample time to recover from loading warm product.
	Power supply	Check for proper voltage to the unit. If there is no voltage to the unit, call an electrician.
	Compressor	<p>If the compressor is not running, check if the unit has a power failure alarm. If the power failure alarm light is on, have an electrician check for proper voltage to the unit.</p> <p>If the compressor is running, open the door and look through the slotted air intake in the bottom of the evaporator cover to see if icing is present on the evaporator. If icing is present and there is no air flow behind evaporator, call technical service for assistance. The evaporator fans may be inoperative.</p> <p>If the compressor is running and there is air flow behind the evaporator, contact an authorized service provider or call the technical support hot line for assistance.</p>